

What is claimed is:

1. An automotive radar comprising:

a transmitting antenna and receiving antennas arranged on the top face of a grounding conductor plate, and

5 a radar transmitter/receiver apparatus for supplying transmit signals to the transmitting antenna and detecting the azimuth of an obstacle from signals of a wave reflected by the obstacle and received by the receiving antennas, wherein:

a diffracted wave prevention structure is provided at  
10 edges of the top face of said grounding conductor plate at least in part.

2. The automotive radar according to claim 1, wherein said diffracted wave prevention structure comprises a radio wave absorber covering said top face edges at least in part  
15 and arranged on the top face of said grounding conductor plate.

3. The automotive radar according to claim 2, wherein a radio wave absorber is also arranged between said transmitting antenna and said receiving antennas.

4. The automotive radar according to claim 2, wherein said radio  
20 wave absorber is comprised of a sponge material containing radio wave absorbing grains.

5. The automotive radar according to claim 3, wherein said radio wave absorbers are comprised of a sponge material containing radio wave absorbing grains.

25 6. The automotive radar according to claim 2, further comprising a radome covering the front of said transmitting

antenna and said receiving antennas, wherein said radio wave absorber is fitted in advance to the radome.

7. The automotive radar according to claim 3, wherein further having a radome covering the front of said transmitting  
5 antenna and said receiving antennas, wherein said radio wave absorbers are fitted in advance to the radome.

8. The automotive radar according to claim 2, wherein the height of said radio wave absorber from the top face of said transmitting antenna is so selected as to prevent radio  
10 waves from radiating outside the range of obstacle detecting angles, and its height from the top faces of said receiving antennas is so selected as to prevent radio waves from arriving from outside the range of obstacle detecting angles.

9. The automotive radar according to claim 3, wherein  
15 the height of said radio wave absorbers from the top face of said transmitting antenna is so selected as to prevent radio waves from radiating outside the range of obstacle detecting angles, and their height from the top faces of said receiving antennas is so selected as to prevent radio waves from arriving  
20 from outside the range of obstacle detecting angles.

10. The automotive radar according to claim 1, wherein said diffracted wave prevention structure has a configuration in which the top face edges of said grounding conductor plate are at least in part made up of at least two faces.

25 11. The automotive radar according to claim 1, wherein said diffracted wave prevention structure has a configuration

in which the top face edges of said grounding conductor plate at least in part have a curved face.

12. The automotive radar according to claim 1, wherein said diffracted wave prevention structure has a configuration  
5 in which the top face edges of said grounding conductor plate are provided with projections.

13. An automotive radar comprising:

a transmitting antenna and receiving antennas arranged on the top face of a grounding conductor plate, and

10 a radar transmitter/receiver apparatus for supplying transmit signals to the transmitting antenna and detecting the azimuth of an obstacle from signals of a wave reflected by the obstacle and received by the receiving antennas, wherein:

the top face of said grounding conductor plate on which  
15 said transmitting antenna is positioned is higher than the top face of said grounding conductor plate on which said receiving antennas are arranged.